

REMARKS/ARGUMENTS

1. Claims 1, 2, 4-9, and 21-36 Comply With 35 U.S.C. §112, par. 1

The Examiner rejected claims 1, 2, 4-9, and 21-36 under 35 U.S.C. §112, par. 1 on the grounds that a critical part of the invention, a Storage Area Network (SAN), is not included in the claims. The Examiner found that the disclosure is strictly limited to Storage Area Networks (SANs). (Final Office Action, pg. 2). Applicants traverse.

According to the Manual of Patent Examination and Procedure (MPEP) “[a] claim that omits an element which applicant describes as an essential or critical feature of the invention originally disclosed does not comply with the written description requirement.” MPEP Sec. 2163.05, pg. 2100-188 (8th Ed., Rev. 3, Aug. 2005). Applicants note that the Examiner has not cited any part of the application that describes the SAN as an essential or critical feature of the invention.

Moreover, the Application discloses that network technologies other than SAN may be used. The Application discloses that the “interconnect 16 [connecting the host and storage devices] utilizes other fabrics, networks or other communications media for transfers between hosts 12 and devices 14, with high-speed fabrics. Indeed, such transfers can be conducted over LAN 18, which also couples these devices.” (Application, pg. 53, lines 10-16). Thus, not only does the Application NOT disclose a SAN as essential or critical, but the Application discloses that network interconnects other than a SAN may be used.

For these reasons, Applicants request that the Examiner withdraw the Section 112, par. 1 rejection on the grounds that the disclosure is limited to SAN network technology.

The Examiner further rejected claims 1, 2, 4-9, and 21-36 on the grounds that the claimed subject matter is not disclosed in the application. In particular, the Examiner found that the Application does not disclose or convey to one skilled in the art the claim requirement that “an interface process in communication with the manager, a switching fabric component, and the hosts, the interface process effecting execution of at least one process residing on the system including the manager, at least one application process residing on the switching fabric component, and at least one application process residing on at least one host”. (Final Office Action, pgs. 3-4) Applicants traverse.

The Application discloses that the SAN has a variety of components, such as hosts, storage devices, and a switching fabric that have associated application software. The Application further discloses that a SAN manager service maintains for selected components, such as the switching fabric components, information regarding management application specific to them. (Application, pgs. 174-175)

The Application discloses a Netview server that communicates with the SAN manager service and allows the operator to launch an application process associated with a SAN component, such as a management application on that component, such as a switch. (Application, pg. 175) The Netview server allows the operator to launch an application process associated with a SAN component, such as a management application on the component. (Application, pg. 176) The Application discloses that once the application is launched the operator can utilize the application to configure the SAN component on which the application resides. "This advantageously allows the operator ... to manage a variety of SAN component, having different management applications, from a single entry point, that is from the Netview server/console." (Application, pg. 177)

This disclosure provides adequate disclosure to support the claimed interface process, in communication with the manager, a switching fabric component and the hosts, where the interface process effects execution of at least one process residing on the system.

Accordingly, Applicants request the examiner to withdraw the rejections under 35 U.S.C. §112, par. 1 because the Application does provide adequate disclosure to support the claim limitations.

2. Amended Claims 31-37 Comply with the Requirements of 35 U.S.C. §101

The Examiner found that claims 31-37 are directed to non-statutory subject matter (35 U.S.C. §101) on the grounds the computer program can be embodied within a non-tangible medium. (Final Office Action, pg. 4)

Applicants amended independent claim 31 to recite that the code is implemented in a computer readable medium to overcome this rejection with respect to claim 31 and claims 32-37 that depend therefrom. Applicants request entry of this amendment.

3. Claims 1-11 and 13-17 are Patentable Over the Cited Art

The Examiner rejected claims 1, 2, 4-9, and 21-36 as obvious (35 U.S.C. §103(a)) over Lagueux (U.S. Patent No. 6,538,669) in view of Nolan (U.S. Patent No. 6,446,141). Applicants traverse with respect to the amended claims.

Amended claim 1 recites system in communication with a network comprising one or more storage devices and one or more hosts via a switching fabric component, wherein application processes reside on the hosts, wherein the application processes configure and manage the hosts in which the application processes execute, and further require: a manager in communication with the switching fabric component and hosts in the network; and an interface process in communication with the manager, a switching fabric component, and the hosts, wherein the interface process performs: obtaining information on hosts and the switching fabric component in the network from the manager; displaying information representing the hosts and switching fabric component in the network; displaying information on application processes associated with the represented hosts and switching fabric component in the network; receiving selection of one of the displayed application processes; launching the selected application process residing on the represented hosts or switching fabric component.

During the phone interview, Applicants discussed amendments to the claims to further distinguish over the cited art and advance prosecution. Applicants amended claim 1 to recite that the manager is in communication with the fabric component. Claim 1 was further amended to recite additional requirements of the interface process performing: obtaining information on hosts and the switching fabric component in the network from the manager; displaying information representing the hosts and switching fabric component in the network; displaying information on application processes associated with the represented hosts and switching fabric component in the network; receiving selection of one of the displayed application processes; and launching the selected application process.

Applicants submit that pgs. 174-177 disclose the added requirement of these claims. For instance, the Application discloses SAN components, such as hosts and a switching fabric having application software. (Application, pg. 174, lines 11-22) According to the Application, the Netview servers displays information on network components and allows the operator to launch an application process associated with a selected SAN component (previously disclosed as a host, storage device and switching fabric) such as a management application residing on that

component. (Application, pg. 176, lines 4-20) The Application further discloses that once the application is launched the user can manage the SAN component. (Application, pg. 177, lines 11-17)

The Examiner cited col. 7, lines 20-31; col. 10, lines 21-28; col. 22, line 65 to col. 24, line 7 of Lagueux as teaching the pre-amended claim requirement of an interface process in communication with the manager and the hosts, the interface process effecting execution of at least one process residing on the system including the manager and at least one application process residing on one host. (Final Office Action, pgs. 7-8) Applicants traverse with respect to the amended claim.

The cited col. 7 mentions a management interface 120 for managing an ISAN server 102A, which according to FIG. 1 is one system in a network. The management interface provides rules based management of the system, including scheduling, process orchestration, monitoring, etc.

The cited col. 7 does not teach the claim requirement of an interface process that displays information representing hosts and a switching fabric in a network and application processes thereon, receiving selection of one of the displayed application processes and launching the selected application process residing on the hosts or switching fabric component. Instead, the cited col. 7 discusses a management interface to manage one server in the network, not launch application processes on other hosts and a switching fabric component in the network as claimed.

The cited col. 10 mentions a user interface for the ISAN server, including a display and input device. The display is coupled to HBC modules to support status displays, configuration display and management and other management functions. The HBC modules are host bridge controllers providing bridging paths. (Lagueux, col. 9, lines 46-50). Thus, the cited col. 10 concerns configuring host bridge controllers. Nowhere does the cited col. 10 teach or suggest an interface process that displays information representing hosts and a switching fabric in a network and application processes thereon, receiving selection of one of the displayed application processes and launching the selected application process residing on the hosts or switching fabric component. Instead, the cited col. 10 concerns a user interface for managing modules within the ISAN server itself because FIG. 3 shows the HBC components 202a, 202b as within the ISAN server 102a.

The cited col. 22 to col. 24 of Lagueux discusses a window for displaying information about a server and to manage a server . (Lagueux, col. 23, lines 1-15). The cited col. 23 further mentions management software showing a table having entries on hosts in the network. A host manager enables the user to assign a name and description to a port and define a LUN. (Lagueux, col. 23, lines 20-39). The cited col. 23 further discusses a dialog box to insert a host name and identifier, and to insert information about the network card, port number, etc. A user interface displays host information, and the user can change or delete a host name in the table, and enables the user to enter information on a host. (col. 23, line 47 to col. 24, line 7)

The cited cols. 22-24 discuss how a manager may view information on hosts and change the name of the hosts in the network as displayed in a table. Nowhere do the cited cols. 22-24 anywhere teach or suggest the claim requirement of an interface process that displays information representing hosts and a switching fabric in a network and application processes thereon, receiving selection of one of the displayed application processes and launching the selected application process residing on the hosts or switching fabric component. Nowhere is there any mention in the cited cols. 22-24 of launching a selected application on hosts and switching components in the network as claimed.

The Examiner further cited col. 18, lines 43-49 of Nolan to address certain shortcomings of the cited Lagueux. (Final Office Action, pg. 8) The cited Nolan discusses a management interface on an ISAN server to control and monitor at the ISAN server. As with the cited Lagueux, the cited Nolan also fails to teach or suggest the claim requirement of an interface process that receives selection of a application process and launches the application process residing on a host or switching fabric. Further, nowhere does the cited Nolan teach or suggest displaying information and allowing selection to launch application processes on SAN components such as hosts and switching components. Accordingly, claim 1 is patentable over the cited art because the cited combination does not teach or suggest all the claim requirements.

Claims 2 and 4-9 are patentable over the cited art because they depend from claim 1. Further, the below discussed dependent claims provide additional grounds of patentability over the cited art.

Claim 2 further requires a graphical output device coupled to the interface process for displaying one or more graphical objects each representing one of the application processes on

the hosts and switching component and the interface process being coupled to the graphical output device for effecting the display of the graphical objects on the graphical output device.

The Examiner cited col. 2, lines 29-45, col. 23, lines 57-60 and FIGs. 18, item 1408 of Lagueux as teaching requirements of claim 2. (Final Office Action, pg. 8)

The cited col. 2 discusses a tool for configuring a storage system, and including a display to prompt the user to input data concerning host systems coupled to the server and to input data concerning storage resources accessible using the server, and to input logical addresses used by host systems to access the storage resources. The cited col. 23 mentions that the user interface has menus and a table to display host information. FIG. 18 shows a user interface in which the user can select to enter information on the configuration.

The cited cols. 2 and 23 discuss a technique for a user to enter information on a network configuration. However, nowhere do the cited cols. 2 and 23 anywhere teach or suggest displaying objects representing application processes on the hosts or switching fabric component, where the represented application is launched. Instead, the cited cols. 2 and 23 discuss a user interface to allow a user to enter information data concerning hosts and a server in a network.

The cited element 1408 discusses a routine to monitor long-running processes in the server. (Lagueux, col. 23, lines 5-10). Nowhere does the cited Lagueux teach or suggest that the icon 1408 launches an application process residing on the host or switching component.

Accordingly, claim 2 provides additional grounds of patentability over the cited art because the additional requirements of claim 2 are not taught or suggested in the cited art.

Claim 4 depends from claim 2 and further requires that the interface process responds to selection of one of the objects representing one application process by effecting execution of the application process represented by that object.

The Examiner cited col. 22, lines 65-67, col. 23, lines 1-5, and FIG. 18 as teaching the additional requirement of claim 4. (Final Office Action, pg. 9) Applicants traverse.

The cited cols. 22 and 23 mentions an image for configuring a storage server and displaying information on the server. Nowhere do the cited cols. 22 and 23 anywhere teach or suggest the claim requirement that selection of an object executes an application process on a host or switching component in a network. Instead, the cited cols. 22 and 23 discuss managing a server, not execution of an application process residing on displayed hosts or a switching component over a network.

Accordingly, claim 4 provides additional grounds of patentability over the cited art because the additional requirement of claim 2 is not taught or suggested in the cited art.

Claim 5 depends from claim 4 and further requires a store containing information regarding one or more hosts and the switching component and one or more application processes residing on selected hosts and the switching component.

The Examiner cited col. 14, lines 58-67, FIG. 11, 22, and 2 (item 150) of Lagueux as teaching the additional requirements of these claims. (Final Office Action, pg. 9)

The cited col. 14 mentions that a cache includes processes that communicate with an interface, and that data structures in the cache include a local cache memory allocation, a cache table, and a drive interface. The driver interface connects with an HDM associated with a circuit. Nowhere does the cited col. 14 anywhere teach or suggest the claim requirements that a store contains information on application processes in hosts and a switching component in a network. Further, the cited item 150 is a storage. Nowhere do the cited FIGs. anywhere teach or suggest the claim requirement that a store contains information on application processes in hosts and a switching component in a network.

Accordingly, claim 5 provides additional grounds of patentability over the cited art because the additional requirements of claim 2 are not taught or suggested in the cited art.

Claim 6 recites that the interface process accesses the store, upon selection of one graphical object representing one host or the switching component to identify at least one application process residing on the host or switching component represented by the selected object.

The Examiner cited col. 14, lines 58-64 and col. 23, line 19 to col. 24, line 13 of Lagueux as teaching the additional requirements of these claims. (Final Office Action, pg. 9)

The cited col. 14 mentions that a cache includes processes that communicate with an interface, and that data structures in the cache include a local cache memory allocation, a cache table, and a drive interface. The driver interface communicates with an HDM associated with a circuit. The cache can be in a high speed non-volatile memory. Nowhere does the cited col. 14 anywhere teach or suggest the claim requirement that the interface process accesses the store, upon selection of one graphical object representing one host or the switching component to identify at least one application process residing on the host or switching component represented by the selected object.

The cited cols. 23-24 discuss a user interface to enter information on network components. Nowhere do the cited cols. 23-24 anywhere teach or suggest the claim requirement that the interface process accesses the store, upon selection of one graphical object representing one host or the switching component to identify at least one application process residing on the host or switching component represented by the selected object.

Accordingly, claim 6 provides additional grounds of patentability over the cited art because the additional requirement of claim 6 is not taught or suggested in the cited art.

Applicants amended independent claims 21, 24, and 31 to include the requirements added to independent claim 1. Applicants submit that independent claims 21, 24, and 31 are patentable over the cited art for the reasons discussed with respect to amended claim 1. Claims 22, 23; 25-30, and 32-36 are patentable over the cited art because they depend from one of the independent claims 21, 24, and 31.

Moreover, claims 22, 25, and 32 are patentable over the cited art for the reasons discussed with respect to 2; claims 23, 26, and 33 are patentable over the cited art for the reasons discussed with respect to claim 4; claims 27 and 34 are patentable over the cited art for the reasons discussed with respect to 5; claims 28 and 36 are patentable over the cited art for the reasons discussed with respect to 8; claims 29 and 35 are patentable over the cited art for the reasons discussed with respect to claim 6; and claim 30 is patentable over the cited art for the reasons discussed with respect to claim 7.

Conclusion

For all the above reasons, Applicant submits that the pending claims 1, 2, 4-9, and 21-36 are patentable over the art of record. Applicants submit that no additional fee is needed. Nonetheless, should any additional fees be required, please charge Deposit Account No. 09-0466.

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The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.

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By: 

David W. Victor
Registration No. 39,867

Please direct all correspondences to:

David Victor
Konrad Raynes & Victor, LLP
315 South Beverly Drive, Ste. 210
Beverly Hills, CA 90212
Tel: 310-553-7977
Fax: 310-556-7984